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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,172	07/17/2003	Peter Ahner	2642	4326

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EXAMINER

ALI, HYDER

ART UNIT PAPER NUMBER

3747

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,172

Applicant(s)

AHNER ET AL.

Examiner

HYDER ALI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6,9-12,21 and 22 is/are allowed.
- 6) ☒ Claim(s) 7,8 and 13-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7,8,13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nolting et al (US 5,036,803).

As to Claim 7, Nolting et al discloses a method of operating a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising the steps of providing a first cooling medium path through a bypass conduit 17, a second cooling medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 20; subdividing the cooling medium paths by electrically actuated valves 18,21 and forming the cooling medium flows by an electrically driven pump 23; controlling both the valves and the pump by an electronic control unit 24 in dependence on operational and environmental parameters as well as nominal values; and preventing a cooling medium feeding by a thermal siphon action, by closing the valves in a first operational phase of the internal combustion engine at low temperatures of the internal combustion engine.

As to Claim 8, Nolting et al discloses a method of operating a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising the steps of providing a first cooling medium path through a bypass conduit 17, a second cooling

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medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 20; subdividing the cooling medium paths by electrically actuated valves 18,21 and forming the cooling medium flows by an electrically driven pump 23; controlling both the valves and the pump by an electronic control unit 24 in dependence on operational and environmental parameters as well as nominal values; reducing a cooling medium feeding by closing one of the valves at cold outside temperatures in a first operational phase of the internal combustion engine at low temperatures; and opening the other valve to a heating circuit.

As to Claim 13, Nolting et al discloses a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising providing a first cooling medium path through a bypass conduit 17, a second cooling medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 20; subdividing the cooling medium paths by electrically actuated valves 18,21 and forming the cooling medium flows by an electrically driven pump 23; controlling both the valves and the pump by an electronic control unit 24 in dependence on operational and environmental parameters; so that in a first operational phase of the internal combustion engine at low temperatures of the internal combustion engine a cooling medium supply by thermal siphon action is prevented by closing of one of said valves and closing of the other of said valves.

As to Claims 14 and 18, Nolting et al discloses bypass conduit 17 of said first cooling medium path is short.

As to Claims 15 and 19, Nolting et al discloses bypass conduit 17 extends in a housing of the internal combustion engine.

As to Claims 16 and 20, Nolting et al discloses said bypass conduit 17 is heat insulated.

As to Claim 17, Nolting et al discloses a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising a first cooling medium path through a bypass conduit 17, a second cooling medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 20; subdividing the cooling medium paths by electrically actuated valves 18,21 and forming the cooling medium flows by an electrically driven pump 23; controlling both the valves and the pump by an electronic control unit 24 in dependence on operational and environmental parameters; so that at cold outside temperatures in a first operational phase of the internal combustion engine at low temperatures a cooling medium supply by thermal siphon action is reduced with one of said valves closed, and the other of said valves is open to a heating circuit.

Claims 7,8,13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Corriveau (US 6,178,928).

As to Claim 7, Corriveau discloses a method of operating a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising the steps of providing a first cooling medium path through a bypass conduit 24, a second cooling medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 34; subdividing the cooling medium

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paths by electrically actuated valves 26,32 and forming the cooling medium flows by an electrically driven pump 28; controlling both the valves and the pump by an electronic control unit 36 in dependence on operational and environmental parameters as well as nominal values; and preventing a cooling medium feeding by a thermal siphon action, by closing the valves in a first operational phase of the internal combustion engine at low temperatures of the internal combustion engine.

As to Claim 8, Corriveau discloses a method of operating a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising the steps of providing a first cooling medium path through a bypass conduit 24, a second cooling medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 34; subdividing the cooling medium paths by electrically actuated valves 26,32 and forming the cooling medium flows by an electrically driven pump 28; controlling both the valves and the pump by an electronic control unit in dependence on operational and environmental parameters as well as nominal values; reducing a cooling medium feeding by closing one of the valves at cold outside temperatures in a first operational phase of the internal combustion engine at low temperatures; and opening the other valve to a heating circuit.

As to Claim 13, Corriveau discloses a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising providing a first cooling medium path through a bypass conduit 24, a second cooling medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 34; subdividing the cooling medium paths by electrically

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actuated valves 26,32 and forming the cooling medium flows by an electrically driven pump 28; controlling both the valves and the pump by an electronic control unit in dependence on operational and environmental parameters; so that in a first operational phase of the internal combustion engine at low temperatures of the internal combustion engine a cooling medium supply by thermal siphon action is prevented by closing of one of said valves and closing of the other of said valves.

As to Claims 14 and 18, Corriveau discloses bypass conduit 24 of said first cooling medium path is short.

As to Claims 15 and 19, Corriveau discloses bypass conduit 24 extends in a housing of the internal combustion engine.

As to Claims 16 and 20, Corriveau discloses said bypass conduit 24 is heat insulated.

As to Claim 17, Corriveau discloses a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, comprising a first cooling medium path through a bypass conduit 24, a second cooling medium path through a main cooler 16 of the internal combustion engine, a third cooling medium path through a heating heat exchanger 34; subdividing the cooling medium paths by electrically actuated valves 26,32 and forming the cooling medium flows by an electrically driven pump 28; controlling both the valves and the pump by an electronic control unit in dependence on operational and environmental parameters; so that at cold outside temperatures in a first operational phase of the internal combustion engine at low temperatures a cooling

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medium supply by thermal siphon action is reduced with one of said valves closed, and the other of said valves is open to a heating circuit.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7,8,13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nolting et al (US 5,036,803) in view of Banzhaf et al (US 5,215,044). Nolting et al does not disclose forming the cooling medium flows by an electrically driven pump. However, Banzhaf et al discloses forming the cooling medium flows by an electrically driven pump 13. It would have been obvious to a person having ordinary skill in the art to modify Nolting et al by employing forming the cooling medium flows by an electrically driven pump in order to replace the mechanical pump with the electrical pump.

Allowable Subject Matter

Claims 1-6,9-12,21 and 22 are allowed.

Response to Arguments

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection. The thermal siphon action inside the engine is not stoppable.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (571) 272-4836. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY YUEN can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hyder Ali

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Willis R. Wolfe
Willis R. Wolfe
Primary Examiner
Art Unit 3747